

**First occurrence of *Hypena lividalis* (Hübner, 1796) in Hungary
(Lepidoptera: Erebidae)**

Botond BALOGH^{1,2*} & Balázs TÓTH²

¹ Eötvös Loránd University, Faculty of Science, H-1117 Budapest, Pázmány Péter sétány 1,
Hungary. E-mail: baloghboti005@gmail.com

² Hungarian National Museum Public Collections Centre – Hungarian Natural History Museum,
Department of Zoology, Lepidoptera Collection, H-1088 Budapest, Baross utca 13, Hungary.
E-mail: toth.balazs@nhmus.hu

Abstract – *Hypena lividalis* (Hübner, 1796) (Lepidoptera: Erebidae) is recorded for the first time from Hungary and from the Carpathian Basin.

Key words – faunistics, accidental introduction, climate change, new record, migration

INTRODUCTION

Hypena lividalis (Hübner, 1796) (Lepidoptera: Erebidae: Hypeninae) is a widespread moth species common in the southern and eastern parts of the Palaearctic Region as well as in the Afrotropical region including Madagascar. It was also reported from the Oriental, Nearctic and Neotropical Regions (LÖDL 1998). In Europe, the species has stable populations in the Mediterranean area, however, it occasionally appears in more northern parts of the continent as a rare immigrant (KRAVCHENKO *et al.* 2006). The possibility of spread facilitated by human travel and transportation has already been raised (LAFONTAINE & SCHMIDT 2013). *Hypena lividalis* seems to be a migrant species supported also by its recent finding in the Netherlands (GROENENDIJK & KONING 2024); it has also been observed in the United Kingdom (JEWESS 2019), Denmark and Sweden (AARVIK *et al.* 2017) (Fig. 1).

Adults fly generally from about March to July and again from August to December in the Mediterranean area. They are often attracted to light, and rarely to sugar (FIBIGER *et al.* 2010). Host plants of *Hypena lividalis* are mainly

* Corresponding author.

Parietaria spp. (Urticaceae), but also *Urtica* spp. (Urticaceae) are mentioned (PÉREZ SANTA RITA *et al.* 2018).

The aim of this article is to report the first observation of *Hypena lividalis* from Hungary.



Fig. 1. Distribution map of *Hypena lividalis* (Hübner, 1796) in Europe, striped field: native range, triangles: records of migrant specimens, dot: the occurrence in Hungary (compiled from FIBIGER *et al.* (2010) and GBIF data**)

MATERIAL AND METHODS

One *Hypena lividalis* specimen (Fig. 2) came to light at the terrace of a private apartment on 27 August 2024 in Csopak, Veszprém County near Lake Balaton, Hungary, at around 23:00 (local time) and it was captured at 23:24. The light source was set on the terrace about 5 m above ground level and 125 m above sea level. The terrace is facing south with panels blocking the view to the top, left and right. There is a large walnut tree (*Juglans regia* L. (Juglandaceae)) blocking most of the view, making the site suboptimal for collecting at light (Fig. 3). An A19 12W, AC85–265V, 385–400 nm UV LED light source was used, which illuminated the wall and mosquito nets on the windows. The moth chose a net

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as a resting place. When undisturbed it remained calm with closed wings in tectiform position, but quickly became active and tried to fly in the direction of the lamp when an attempt was made to catch it. The specimen was placed into a vial and put into a freezer. Due to the difficulties during capturing the specimen its thorax and wings became worn and it lost its labial palps.

RESULTS

Hypena lividalis (Hübner, 1796) (Figs 2, 4)

Material examined – One female, Hungary, Veszprém County, Csopak, 46°58'33.5"N 17°55'03.7"E, 27.VIII.2024, leg. Botond Balogh, id. no. HNHM-LEP-12404; deposited in the Lepidoptera Collection of the Hungarian National Museum Public Collections Centre – Hungarian Natural History Museum, Budapest (HNHM).

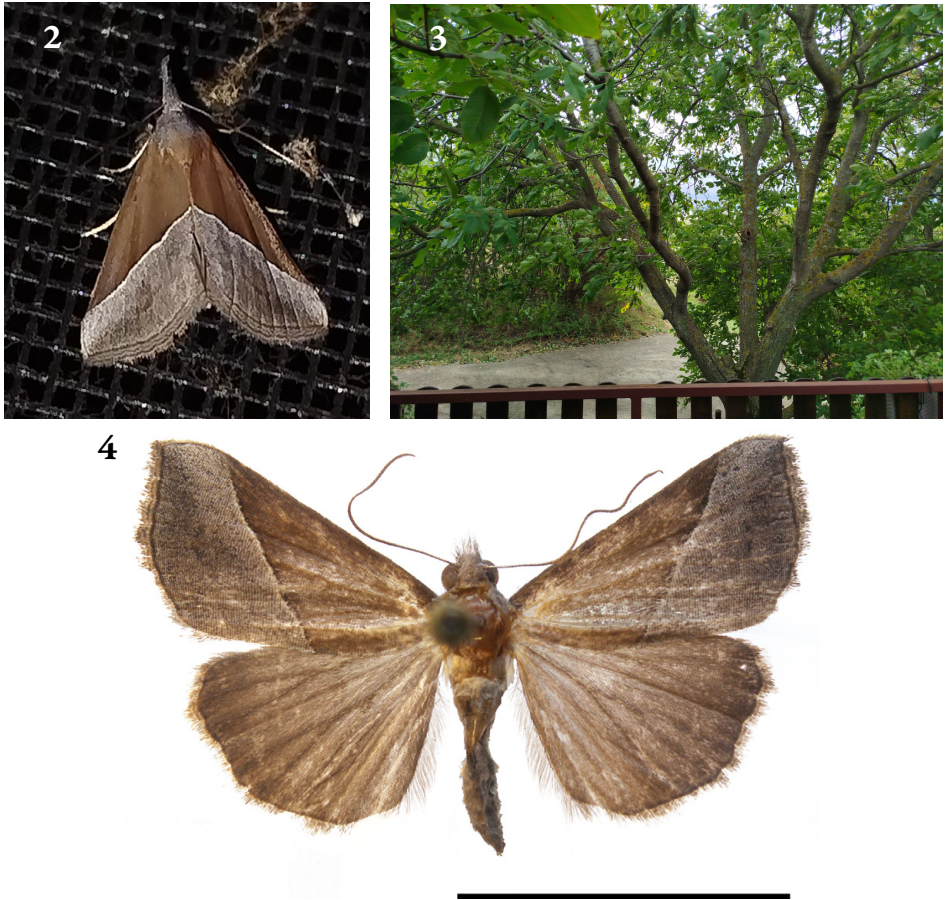
Remarks – First record from Hungary and the Carpathian Basin. In the recent years several species from the superfamily Noctuoidea, belonging to the Mediterranean fauna, have been found in Hungary, indicating the warmer climate, their capability to reach new areas far from their original habitats and also the increasing number of moth observers. An example for this phenomenon is *Zebeeba falsalis* (Herrich-Schäffer, 1839) (Erebidae) which was found in Hungary four years ago (SZEŐKE 2021). The latest species known to have immigrated from the Mediterranean is *Grammodes bifasciata* (Petagna, 1786) (Erebidae) observed in 2024 (TÓTH & BALOGH 2024).

Although *Hypena lividalis* in Hungary is probably an immigrant or has been introduced accidentally, it cannot be excluded that this species will colonise the Carpathian Basin. Due to climate change the temperature has become more favourable for the species. Its host plants are widespread in Hungary. Near the collecting site there is an old cellar with most of the vegetation nearby has been left to overgrow allowing *Parietaria* spp., one of the main host plant species of *Hypena lividalis*, to establish stable colonies. Considering its host plants, this moth species is of minor economic significance, especially if compared to several other non-native species that have arrived to the country earlier, e.g., *Helicoverpa armigera* (Hübner, 1805) (Noctuidae), which became a serious pest in Hungary (KESZTHELYI *et al.* 2013).

Identification – *Hypena lividalis* can easily be distinguished from its congeners by its wing pattern, which is unique among moths occurring in the Palearctic Region. There is an oblique white line extending from costa to the half point of the dorsum on the forewing upper side delimiting the outer half of the wing with a brownish-greyish ground colour and the inner half with a brownish-ochraceous ground colour (CARVALHO *et al.* 1999). Although the

specimen examined in course of the present study became worn, it remained in readily identifiable condition, with its pattern exactly matching the diagnosis above.

Proposed Hungarian name – “Köpenyes karcsubagoly”, in allusion to the characteristic wing pattern.



Figs 2–4. *Hypena lividalis* (Hübner, 1796) in Hungary, 2 = alive specimen at the collecting site in resting position, 3 = the view from the collecting site to south, 4 = set specimen, scale bar = 10 mm (photos by Botond Balogh (Figs 2–3) and Balázs Tóth (Fig. 4))

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